

**WHAT IS CLAIMED IS:**

1. An engine generator apparatus for rectifying and converting an alternating output of a generator, which has multi-phase windings and is driven by an engine, and  
5 converting the rectified output by an inverter into an alternating current at the frequency of a power system and the alternating current is interconnected with the source of said power system, comprising:

a means for starting the interconnection with the system  
10 source when a direct current voltage rectified rises up to first predetermined level after the start up of the engine and then increasing the output of the inverter;

a means for canceling the interconnection when the direct current voltage drops down to below second  
15 predetermined level, and for re-starting the interconnection with the system source when the direct current voltage returns back to the first predetermined level; and

a fault detecting means for judging that the power  
20 generator has a fault when the direct current voltage drops down to below the second predetermined level after the re-starting of the interconnection.

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2. An engine generator apparatus according to claim

1, wherein the output of the inverter is gradually increased at the start of the interconnection of the apparatus with the power system.

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3. An engine generator apparatus according to claim 1, comprising a means where a generator fault signal is outputted, when the canceling and the re-starting of the interconnection with the power system is repeated.

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4. An engine generator apparatus according to claim 2, comprising a means where a generator fault signal is outputted, when the canceling and the re-starting of the interconnection with the power system is repeated.

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